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THE TREATMENT OF PARALYSIS OF MOTION.

[Communicated for the Boston Medical and Surgical Journal.]

BY CHARLES FAYETTE TAYLOR, A.M., M.D., OF NEW YORK.

DURING the past two years and a half, my associate and myself have had twenty-three cases of paralysis of motion, none of them immediately after the first attack, but all of them after the ordinary treatment in such cases had been employed, to the satisfaction of physician and friends that the extent of its usefulness had been long past. They were thus all of a chronic character, being from six months to twenty-three years' standing—averaging, probably, two or three years. Four of these cases were broken-down "fast men," who, with one exception, were not benefited by the treatment pursued. Of the others, embracing *nineteen cases* of long-standing paralysis, most of which had long since ceased to show any signs of improvement, while in others there was an evident decline, *all* were very much improved; some were enabled to walk, who before were helpless; some (children) were perfectly restored—the strength of a paralyzed limb, for instance, being only less than the other as its size is less—and in every case the results of the treatment have been much greater than we could anticipate when the present mode of treatment in these cases was adopted.

While in Europe, during the summer of 1856, my attention was called to a system of exercises for those cases given over by the ordinary practitioner, which seemed so rational, and based upon such well-known physiological laws, that I spent some time in becoming acquainted with all its details, and have since put it into practice with the above results.

The theory is this:—paralysis of motion is a disease of the nervous centres, the muscles being only secondarily affected from want of use, by having their normal stimulus and contraction cut off. The disease of the nervous centres, causing this inability of the nerve to conduct the impulse of the will to the muscle, is clearly divisible into two parts, namely, the *organic*, and the *functional*—

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organic, to the extent of the actual obstruction by reason of the existing disease, whether softening, effusion and pressure, or an apoplectic clot; and functional, to the extent of the original shock producing a suspension of function, and the continued inability to take up its manifestation at any given point after such suspension, although the original organic cause may have ceased to exist. The converse we also find to be true; that is, a disease of the brain may exist, but if not of a nature to produce a shock, or sudden interruption of function, the function will continue up to the full extent of the capacity of the nervous system. The latter, of course, is incapable of being ameliorated, for at the first step we are met by the organic lesion, which we here suppose to be incurable. But where amelioration of the organic lesion does take place, it does not follow that there is a corresponding amelioration of the paralysis; and it is necessary to have a resource for keeping the function up to its full capacity. Now it seems rational to suppose that so much of a paralysis *as is functional* (and in many cases it constitutes all there is remaining after the absorption of an effusion or clot, &c.), can be cured under favorable conditions.

The principle in the treatment of paralysis consists in ascertaining the conditions best adapted to call out any latent power. In accordance with the pathology, the primary conditions of the treatment should have reference to the *nervous* system, rather than to the muscular, which is only secondarily affected. A mere contraction of a muscle, as such, whether produced by strychnia, electricity, reflex action, or otherwise, possesses no ability to relieve the interruption of function in the organ which is the seat of the disease. A contraction, to be remedial, must be produced by a *coördinated volition*, which would be a functional manifestation capable of development.

Ordinary exercise, for these cases, has connected with it several unfavorable conditions. In the first place, the *morale* is unfavorable. The patient cannot *will* with adequate intensity and desire. No one can seriously and efficiently *try* to do what he knows he cannot do. A paralytic can no more really endeavor to raise a limb, or contract a muscle, which a thousand unsuccessful efforts have convinced him he cannot do, than he can seriously essay to fly. He can scarcely *try* to *try*.

And secondly, if he *does* make an effort, other muscles are so much more sensitive to the stimulus, and act so much more easily, that the impulse of the will is diverted to other parts, and another movement than the one intended is the result. And so the pernicious habit of the system is kept up. Thus it is, that these cases re-act to a certain extent, and then stop far short of their actual ability to recover.

The following rules may be laid down as guides in the treatment of these cases:

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1. Secure, in the first place, a right *direction* of volition, by placing the patient in such a position that no other muscles can act than the ones toward which the impulse is sent.

2. Or (where there is some power remaining), cause a *greater* contraction in the affected muscles, *by the necessities of the position*, than can exist at the same time in any other part—the contractions converging toward, and accumulating in the feeble muscles.

3. Make every movement *very slowly*, so as to secure the maximum effect in the muscle (contraction of fibre), with the minimum expenditure of nervous force.

4. Cause every movement to be perfectly definite; a *mere* movement does no good, but a *definite* one is coördinated by the nervous system (cerebellum) and has an initial effect there.

5. Secure an effective *volition* by having each movement, no matter how simple, made only under a definite command.

6. Do not exhaust the feeble resources of the nervous system by over-doing. This is exceedingly important. One or two well-sustained, definite impulses of the will are worth more than any number of the contrary ones.

7. Always assist the patient in every movement, and never allow him to attempt one that he does not execute apparently with his own force, even if extraneous aid is given, which aid is always necessary in the beginning. Assist or resist, according to the ability of the patient and the effect desired; but always *direct* by actual contact.

If the above rules are strictly adhered to, the result will be truly gratifying. Two cases will illustrate the proceedings.

In October, 1858, I was called, by the advice of the attending physician, to see a lady 74 years old, who, ten months before, had experienced an apoplectic attack, followed by complete hemiplegia of the right side. Reaction to a certain extent followed, so that when I saw her she could walk alone, and get up and down stairs with help, but she had never been able to move, in the least, the right arm. She walked, as such persons usually do, dragging the right leg.

This had been her condition for some months. Two months' treatment on the foregoing principles enabled her to get considerable control of the right arm and hand (the fingers were previously strongly contracted into the palm), and she could get up and down stairs alone, lifting the right foot and putting it forward as others do. In all other respects the improvement was as marked. Here was a member (the right arm), previously entirely useless, to a certain extent restored to use.

On the first of last December, a lad of ten years was brought to me with paralysis of the left side. Five years before, he was kicked by a horse in the right fronto-parietal region, and a portion of the skull, 3 inches long by $2\frac{1}{2}$ broad, was depressed and forced

under the adjoining parts. The brain was lacerated, and the fragments of skull removed with great difficulty. He was comatose for twenty-four hours, when consciousness returning, he was found to be paralyzed on the left side. After a tedious convalescence of a year, during which unhealthy granulations had to be ligatured, an abscess formed, &c., the wound healed and he was able to walk, but he never regained the use of his hand. The fingers were flexed, and he had not the least control over them; the arm he could move about feebly; and the leg would support about one fourth or one fifth of the weight of the body. His position was inclining toward the left side, and that side was deficient in development. His mind was not affected. This was his condition when he commenced treatment. After three months of the systematic exercises, he could use his hand to climb a ladder, carry things, and even began to feed himself; he could stand on the foot of that side, sustaining the *whole* weight of the body for fifteen minutes (as long as most people could). His form is erect, he walks with only a slight hitch in his gait, and is otherwise remarkably changed. He has since had a severe attack of pneumonia, and was obliged to suspend treatment and return to his house in the country; but I saw him yesterday, and find that he has lost none of the control gained over the paralyzed muscles. He continues the treatment. This case is interesting because we know definitely what the lesion is, and also that during so great improvement there could have been no corresponding change in the brain, which had cicatrized four years before. I ought to have said, that for a year or two past he had sensibly failed as to the use of the paralyzed muscles.

For a more extended description of the treatment and reports of cases, see *American Medical Monthly* for November, 1858.

29 *Cooper Institute, New York.*

VESICO-VAGINAL FISTULA.—(SECOND ARTICLE.)

[Translated from the *Gazette Hebdomadaire de Médecine et de Chirurgie* of January 28th, 1850, for the Boston Medical and Surgical Journal.]

BY GEORGE HAYWARD, JR., M.D.

THE second publication of Dr. Hayward contained fewer original ideas than the first; but, in requital for this, we find information of great utility, and such as surgeons are usually too sparing of. I will now give his statement of several unsuccessful cases, which induced the author to endeavor to seek out the causes of failure, and to modify his first operation in those points in which it appeared to him to be defective.

We cannot too much insist upon the necessity of publishing, with full details, an account of the hindrances experienced in performing operations; it is the only way to pass judgment upon what has been done, and warn others against new mistakes, and to pre-

vent the patient from being continually the subject for new experiments. A surgeon has not done enough when he has indicated, in a line or two, that one of his operations has failed; for those who come after him could always attribute the want of success to accident, and are induced to try again in the hope of being more fortunate. Brevity in such a case, although it may bear witness to the good faith of an author, does not guarantee him from the suspicion of ignorance, and increases the amount of responsibility which rests upon him. Here, as elsewhere, the naked truth is necessary without those reservations which serve it as a veil.

Dr. Hayward performed his second operation in August, 1840, upon a woman of about 35 years of age, already the mother of several children. The case was very unfavorable. In the space of two years, six operations were performed, which produced an amelioration of the difficulty; but the text is not sufficiently explicit for us to know whether the fistula was ever completely closed. These are the last statements with regard to it: "The general condition was gradually improved, the ulcerations (from the upper part of the thighs to the knees) caused by the urine had disappeared. The urine could be retained for several hours. The bladder had, in part, recovered its contractile and expulsive powers. The patient could, without inconvenience, walk and ride. Her condition was entirely changed, life was no longer a burden to her; she became once more a happy and useful member of society."

These words allow us to place this among the successful cases, although the statement is not altogether complete. For the rest, if a general table of the operations for vesico-vaginal fistula should at any time be formed, it would be necessary to resolve the cases into three categories: those which were entirely unsuccessful, those which were completely successful, and those which were relieved in different degrees. The last division, indeed, is sufficiently elastic to be abused a little; it must, however, be agreed that the surgeon has not labored in vain when the patient is able to retain her water two or three hours, or where a little plugging of the vagina is sufficient to remedy a slight dribbling. A result like this, although imperfect, is yet very advantageous, and experience shows that reparative surgery has often obtained similar ones. I address this digression to those too difficult critics who are inclined to reject plastic operations, under the pretext that they do not completely reestablish the form and functions of an organ.

I come now to the unsuccessful cases. In December, 1840, Dr. Hayward treated a patient of about 22 years of age. The operation and its results went on altogether successfully; at the end of a proper time the parts were examined. The adhesion appeared complete; the sutures were therefore removed. But, on the following day, the water passed freely through the fistula, which

appeared to be as large as before the operation. The patient refused to submit to a new trial.

In seeking for the cause of this vexatious accident, Dr. Hayward thought that the removal of the sutures might have had its part. It was impossible to reach the threads without bringing down the bladder to a certain point, and in consequence without exercising upon the newly re-united parts a traction capable of breaking the new cicatrix, as yet destitute of sufficient power of resistance.

This hypothesis appeared to be soon confirmed. A new patient presented herself in October, 1842. The injury offered the greatest resemblance to that of the preceding case; everything promised a favorable result. The operation was performed, and, some days after, an examination was made of the parts. A solid adhesion appeared to be established throughout the whole extent of the fistula. Nevertheless, in bringing down the bladder a little, in order to cut the stitches, the adhesive matter which united the edges of the opening yielded suddenly, and the opening showed itself as large as before the operation. Whether the parts would have remained re-united if all traction had been abstained from, it is impossible to say; in all these cases from the first, experience confirmed Dr. Hayward in the idea that the proceedings necessary to bring down the sutures could very much affect the re-union; he therefore thought it best to change the manner of operating.

Up to this time the mode of operating, and the proceedings after it, such as we have described in the first article, had not varied, so that the first phase of the operation of Dr. Hayward extended in reality to the year 1843. Let us cast a glance to the general results which it had furnished. Four patients had been treated. With the first there had been complete success; with the third and fourth, failure at the first attempt. The second had to be operated on six times before she was cured, even allowing that a radical cure was effected in her case. This gives us the following proportion: 9 operations—7 more or less unsuccessful, 2 successful.

To resume: two patients had been cured out of four. Nothing proves that the other two would not have been equally fortunate, with a little more perseverance. If the time when these attempts were made is taken into consideration, the proportion is not discouraging.

Let us see, in the mean time, to what new expedient Dr. Hayward thought he ought to have recourse. He gave up the removal of the sutures, and resolved to leave them in until they were loosened by the ulceration which they would cause. From that time he changed, also, the threads he had used, and substituted for them ligatures of dentists' silk, which are made of a single twist. The paring and the mode of passing the sutures remained the same. The object

of this change is clearly shown in the following sentence: "I regard the small size of the ligature, and allowing it to remain in its place until separated by the efforts of nature, as a great improvement, and well calculated to have a favorable influence on the result of the operation."

An analysis of the following cases will enable us to judge of the value of the innovation.

CASE I.—A woman of 23 years of age was delivered of her first child five years and a half before, the labor lasting four days. Two weeks after, a slough separated from the upper wall of the vagina, leaving a transverse opening into the bladder two inches long, situated an inch behind the meatus urinarius. Now, in consequence of having worn a catheter for a long time, the opening is reduced to the size of the end of a man's finger. Cannot retain the urine, except when perfectly quiet, and then only for a very short time. Various nervous troubles; great irritability of the vagina.

The operation was performed October 16th, 1843. The fistula was half an inch in length, and was situated an inch and a half behind the meatus urinarius; two sutures were used to bring the edges together. A large female catheter was then introduced and secured *in situ*, and the patient carried to bed, and directed to lie upon the right side.

Had some general uneasiness during the following days, but no serious symptom. On the 24th, her condition was very good, did not wear the catheter, could retain her water an hour or two. In the upright position the water passed by the meatus, and none by the fistula. On the 26th, had not worn the catheter for two days, was able to retain urine, but not to expel it voluntarily. On the 29th, the stitches still remained in the wound; some symptoms of general uneasiness; catamenia appeared Nov. 4th; symptoms improved during the following days. Nov. 17th, the fistula was entirely closed; troubled at times with irritability of the bladder. The patient had not yet regained control over the meatus, but was not obliged to use catheter at all. Rode out every pleasant day; her condition was comfortable. Left the Hospital Nov. 27th.

[On the 19th of February* of the following year (1844), three months after the cure was effected, returned to the Hospital. Reported that, on leaving the Hospital, she rode to Springfield, travelling all day. Passed urine once without difficulty, and on endeavoring to again, found herself unable to do so. Was in great pain all night, and since that time had had constant passage of urine into the vagina. On examination, a small opening was found at the upper part of the cicatrix, large enough to admit the end of

* M. Verneuil has fallen here into the error of supposing that the time when the fistula re-opened was February 19th, 1844; whereas it was November 28th, 1843, the day after her discharge from the Hospital. This mistake has been corrected in the translation, together with several others of less consequence, but it was thought best to mention them, to account for the variation from the original.—TRANS.

the catheter, through which the urine trickled down over the cicatrix, which is covered with fungous granulations. Several ounces of urine in the bladder.] The patient placed herself again under the care of Dr. Hayward, who, between April 25th and August 15th, operated four times, gaining something at each operation, so that the fistula was reduced to one of so small a diameter that the bladder regained not only its power of retaining, but also of expelling its contents at the patient's will.

The patient returned home, and the operator was informed, in 1855, that her health was good, that she suffered but little from her infirmity, and that she had given birth to a living and healthy child.

Of all the patients which Dr. Hayward treated, this one was the most difficult to manage, both during the operations and in the intervals between them, and this may, to a certain extent, account for the incomplete success obtained.

CASE II.—Woman of 29 years of age; confined with her first child three months before; labor was long, terminated by the forceps; child dead. She had not passed water for thirty-six hours, when she was delivered; an hour after, the urine began to dribble into the vagina, and continued to flow off by that passage afterward.

On examination, Dr. Hayward found a small transverse fissure, about two inches within the vagina. The operation was performed July 5th, 1845. The bladder was brought down by means of a whalebone bougie, introduced through the urethra, which caused much pain. Two sutures were used to close the opening, a catheter introduced, and the patient placed upon her side. The urine passed readily through the catheter until the fourth day, when it became obstructed and was removed, and another substituted.

The ligatures came away on the seventh day; catheter was removed two or three days after. The patient could retain her urine for nearly two hours. After this time it passed through the opening, which is much smaller than before the operation. Discharged relieved.

CASE III.—A woman 30 years of age. Treated for a supposed incontinence of urine since her last confinement. An examination showed the existence of a fissure, which allowed most of the urine to pass through it; when in the erect position, the urine could be retained only a very short time. She suffered much pain, and there was excoriation and great sensibility of the neighboring parts. The sutures were inserted, and the treatment conducted as in the previous cases. At the end of a fortnight, it appeared that the fistula was diminished, but not entirely closed. A second operation was then performed about three weeks after. The result was that the bladder recovered, in a great measure, its powers of retention and expulsion. A little more than a year afterward, Dr. Hayward saw the patient again; her condition was very much

improved since the last operation. By a little care on her part to introduce the catheter occasionally, nearly all the water passed through the natural passage. She thought that there was no necessity to submit to further surgical treatment, nor did he think that any was called for. Nothing has been heard from her since, but it is probable that the fistulous opening has contracted still more, so that she experiences little if any inconvenience from it.

CASE IV.—A woman 40 years of age; the injury was produced at her third labor, which, at the end of twenty-two hours, was terminated by a midwife, without instruments. The fistula, three quarters of an inch in extent, with thickened and indurated edges, was situated at the fundus of the bladder, near the os tineæ.

The operation was performed March 14th, 1847, with sulphuric ether, the wall of the vagina being brought down by means of the whalebone bougie. The edges were then pared, so that the cut surfaces inclined from without inward, and when in contact the mucous membrane was corrugated. Two sutures were then taken, not extending through the inner coat of the bladder. By this the fissure was completely closed. A large-sized catheter was then introduced into the bladder and secured there. Owing to the ether, the parts were so much relaxed that the bladder was brought down with the greatest ease. On the 21st of March, the fissure was very much diminished, but it still allowed a small quantity of urine to pass through; the catheter was removed and replaced by an elastic bougie. April 11th, the urine leaked a little through the fistula, but was retained for several hours; the sutures came away on the morning of this day. In the evening the whole trouble returned, the water continually running through the fissure. April 14th, the operation was repeated. Patient was placed in bed with the trunk elevated, so that the urine may gravitate below the fissure. April 17th, patient doing well; catheter removed, and an elastic one introduced every three or four hours. April 25th, fistula is closed; no leakage; incontinence of urine; catheter to be introduced many times a day for a long time. May 3d, discharged well.

This case is interesting from various causes: anaesthesia assisted the bringing down of the vesico-vaginal wall; the paring was so done that the cut surfaces inclined from without inward, so that the mucous membrane of the bladder was corrugated when the edges of the fistula were in contact; the position of lying upon the side, after the operation, was changed for one almost sitting. The second operation was performed only three days after the rupture of the first union. It is annoying that nothing is said as to how the operation was performed, and whether the paring was done in the same manner. In general, quite a long time intervenes between two consecutive operations, which is, perhaps, an error. Finally, wearing the catheter was omitted at the end of three days, and was replaced by frequent catheterism. We ob-

serve, in passing, that the paring and the treatment after it, in this case which was successful, were very much changed.

CASE V.—Woman 22 years of age; confined with first child eight weeks before. Flowing of water into vagina commenced two days after confinement; fistula of an oval shape, situated two and three quarters inches from meatus, is large enough to admit the end of the little finger; operation performed Dec. 16th, 1849. Etherization, bringing down the fundus of the bladder, paring and closing fistula with two sutures, were as in the preceding case. The first suture came away Dec. 26th; the second remained until Jan. 9th. There was no leakage into the vagina, the water could be retained an hour and a half and expelled at pleasure.

This patient was discharged at this time, at her own request, but it has been ascertained since that she has remained perfectly well. The second stitch came away without trouble.

We have thought that we ought to analyze all the cases which constitute the second series of operations performed by Dr. Hayward, since it is impossible to judge of the methods without making a thorough examination of the cases in which they were employed. We formed a sort of table of the results furnished by the first method. Let us submit the second to the same criterion.

Five patients were treated; three were completely cured; in the fourth case I admit the want of success, but the diminution of the size of the opening did, without doubt, relieve somewhat the inconveniences caused by the infirmity; in the last case, on the other hand, the relief amounted almost to a cure. The operations performed were thus divided: four complete cures; six unsuccessful cases; one case of almost entire success.

Taken on the whole, this result is very much superior to that of the first series. Let us now examine and see whether this increase of success is owing to chance or to improvements in the operation.

Dr. Hayward, in 1842, attributed two consecutive failures to bringing down the bladder, and the traction exerted upon the new cicatrix during the removal of the stitches; he gave up removing them from that time, and resolved to leave the expulsion of the sutures to the natural process which would relieve the tissues of these foreign bodies. We do not deny the injurious influence which any violence would have upon the fragile adhesive matter which re-unites a wound; but we think that about the eighth day the re-union possesses already a considerable power of resistance, when the uniting substance has not undergone any alteration. We think, also, that in the other case the union is very precarious, and susceptible of destruction, in spite of the prolonged retention of the means of union and of the artificial bringing together of the sides of the wound; in one word, we believe that, in the two cases to which we have alluded, the failure of the suture was decided when the threads were withdrawn. If in these cases the expulsion of

the threads had been left to the efforts of nature alone, the reappearing of the fistula would have been delayed some days, but it would have shown itself inevitably. In the fourth case, the sutures detached themselves spontaneously at the twenty-seventh day; but, seven days after the operation, the urine already flowed through the fistula, and therefore the union was not effected. In truth, the rent does not show itself until some hours after the removal of the ligatures; so that it can be easily understood how the sutures remaining in their places, could keep also the sides of the fistula in contact, at a time when the union itself had failed. This shows that we must not take the parts to be really united together, which in fact are only in close apposition.

The extent of this article will not allow us to decide at what time, after the operation for vesico-vaginal fistula, it is proper to remove the sutures. This time is, moreover, variable, according to the size and character of the thread, the extent of the fistula, and the degree of tension to which its edges are subjected in order to bring them together, so that it is difficult to give any general rule upon the subject. Nevertheless, it may be said that, from the moment when the sutures cause inflammation, their presence does more harm than good to the re-union; I do not even except the slow process designated as eliminating inflammation (set up in order to remove the sutures), since its neighborhood is always dangerous to the plastic tissue which holds the sides of the fistula together, and which is, as yet, but feebly organized.

For this reason I reject the first modification practised by Dr. Hayward, because the removal of the sutures can, in my opinion, be effected without bringing down the bladder, and without drawing upon the vesico-vaginal wall. I have removed five sutures from a very deeply-situated vesico-vaginal fistula without meeting with the unfortunate result which Dr. Hayward experienced, and the thing would be very much facilitated by placing the patient upon her knees and elbows, and by the employment of the univalve speculum of Dr. Marion Sims.

One circumstance in Dr. Hayward's operation, it is true, diminishes very much the ill effects which I attribute to the spontaneous expulsion of the sutures. This is, their situation in the thickness of the vesico-vaginal wall, without penetrating into the bladder; for thus it can easily be seen how a re-union of the wound in the bladder can take place above the suture. In the usual mode of operating, on the contrary, where the suture penetrates into the bladder, to leave the sutures in until they were removed by natural processes would almost necessarily produce secondary fistulas more or less troublesome, even admitting that re-union of the original fistula had been successfully accomplished. This accident, which at least retards the cure, if it does not require new operations, may frequently be observed when a suture gives way instead of being taken out by the surgeon. The innovation intro-

duced by Dr. Hayward comprehends two totally distinct things; and, if, after what precedes, I reject the first, it is quite otherwise with the second; that is, the small size of the sutures made use of. This is a real improvement, and is, as I shall show by and by, one of the principal points in the process of Sims and Bozeman. Diefenbach, whose authority in such a matter no one will question, extolled insect pins very much, as we know, as a means of bringing the parts into very close apposition in plastic surgery. Amusat, a person of great experience, employed the same method; and Dr. Hayward himself has employed for the hare-lip operation very slender pins, or fine steel needles. In short, the size of the foreign body placed in our tissues is by no means a matter of indifference.

Upon this small, but important point, surgeons have held diametrically opposite opinions. Some employ large sutures formed of three or four waxed threads united into a flat cord; while others use extremely fine sutures. Of course the first are placed at a sufficiently long distance from one another, while the others can, and ought to, be placed very near together. The advocates of the large sutures maintain that they bring the parts more closely together, and keep them more firmly in contact. In my opinion, however, they think of the present rather than the future; it is not to be denied that their method is the most expeditious, for two large sutures will suffice where four small ones would be necessary, and each suture requires a considerable time to be introduced; but neither can it be denied, other things being equal, that a large foreign body will produce a more rapid and more violent inflammation in our tissues than a small one of the same substance. The same persons, consistently, say that small pins, and fine threads, act as cutting instruments, and divide the tissues more rapidly than large ones. This is an evident mistake; separation of the lips of a united wound is only caused by ulcerative inflammation; and two threads being given, that one will break the union most quickly which will produce the greatest amount of inflammation. If it is admitted that our tissues do not bear a large seton as well as a small one, the question is decided. I do not hesitate, then, to consider the ribands employed in this operation as altogether irrational, and entirely unsuited to the end proposed.

The slender threads are only liable to slight objections, which can be very easily refuted. It may be feared that they would be too weak to restrain the tendency which the lips of the wound have to separate, and that they would not bring the edges well together on account of the small hold which they have upon the tissues which they go through; that they would break during the performance of the operation, or that they would allow the re-united parts to gape in the interstices between the stitches. In order to remedy these slight inconveniences, it is necessary to select sutures which have a sufficient strength in a small bulk, and to bring them suffi-

ciently near together, placing them four or five millimetres apart, which it would be dangerous to do with the large threads.

To resume: Dr. Hayward had a judicious appreciation of the favorable influence of small sutures, and, if he had thought of employing metallic sutures, he would have left but little for his successors to do.

Let us observe that the two papers which we have analyzed appeared in 1851, and that in them may be found the greater part of the fundamental ideas, which, in our opinion, established the superiority of the operation of Drs. Sims and Bozeman. We do not wish in any manner to depreciate the remarkable operations of these last; we have only wished to do justice to Dr. Hayward for having, during ten years (1839-1849), turned his attention to the cure of vesico-vaginal fistula, one of the greatest triumphs of modern surgery.

A desire to make this article complete, causes us to add to the previous cases an analysis of an operation performed by Mr. I. Baker Brown, a distinguished surgeon of London, by a method which, in spite of some marked differences, resembles that of Dr. Hayward where the sutures were left to be thrown off spontaneously by the efforts of nature (*Medical Times and Gazette*, April 17th, 1858, p. 393). Mr. Brown adds some remarks to the case. He lays great stress upon union at the first attempt, a very rare result; upon allowing the stitches to come away spontaneously, as in Dr. Hayward's method; and, finally, upon an early operation, which appeared to him to be very advantageous.

We could, for our part, dilate upon the method of paring, already rendered famous by Dr. Minturn (of New York); upon the good effect of the quilled suture, &c. &c., but we should be drawn too far, and we stop ourselves here. AR. VERNEUIL.

Bibliographical Notices.

Ophthalmic Hospital Reports, and Journal of the Royal London Ophthalmic Hospital.

We have previously referred to this Journal in terms of high commendation; and every number seems not only to make good the first fair promise, but in certain respects surpasses the earlier issues. Thus we have, in the number for January, 1859, besides many papers and cases of unusual value and interest, some very finely-executed representations of the ophthalmoscopic appearances in a case of "Apoplexy of the choroid (?) and retina about the right optic nerve entrance." The appearances in the left eye of the same patient are likewise given; and the case is reported in the Journal. The chromo-lithographs are of a high order of excellence; and such must always peculiarly enhance the worth of a periodical devoted to the pathology of the eye.

Among the important cases reported in the number to which we allude, are seven instances of strabismus in one family, minutely de-

tailed by the accomplished editor, Mr. Streatfield. Mr. S. takes occasion to remark the ignorance still prevailing among the poorer classes in London, as to the operation for relieving strabismus. We have remarked the same thing here, having frequently suggested to the parents of squinting children, to whom we had been called for other ailments, that the deformity might and ought to be removed—a thing which not only seemed never to have occurred to them, but which, in many instances, they are slow to believe. Many operations for strabismus, however, are performed at our public infirmaries and in private practice.

We observe, also, in the same number of the Ophthalmic Journal, an exceedingly interesting, and to us totally novel, case, the phenomena of which were referrible to *lactation*. It is entitled “Temporary Obesity and Amaurosis during Lactation,” and is related by Dr. Septimius Gibbon. During her first two lactations, the patient, who is 24 years old, became “very fat,” so much so, that on the first occasion, the rings she wore on her fingers had to be filed asunder. At the same time, the muscular debility was very marked, and her eyesight failed her more or less. As soon as she weans her child, she has been accustomed to lose a good deal of her fat.” In her third lactation, this woman entirely lost her sight—the condition being amaurotic—the pupils “dilated and nearly insensible to light. She could not discern the situation of the window in the room.” Dr. Gibbon directed her “to wear the child, to drink milk, to eat meat twice or three times a-day, and to take the following draught: *H. Syrup. ferri iodidi, m. xx. ; ext. nucis vomicæ, gr. 4; infus. columbæ, 3i., ter die. Pil. aloes c. myrrha, gr. x., alt. noct.* With this plan of treatment, the menstrual discharge soon made its appearance. She lost some of her fat, and regained her visual powers.”

The combination of temporary obesity and amaurosis is the novelty to which we above alluded, and the peculiarity is especially referred to by Dr. Gibbon, who says—“Many cases have been recorded of amaurosis as symptomatic of haemorrhage, and debility arising from prolonged lactation; but I have not been able to meet with one accompanied, as this case was, with an excessive development of fat in an early stage of suckling.” The reporter declares his opinion “that the amaurosis arose from organic change, as fatty degeneration, rather than from defective circulation in the retinae.” The anaemia, he states, was but slight. Through a mistake made by the patient, no ophthalmoscopic examination of the eyes was obtained.

In addition to the above, we have several interesting cases of extraction of foreign bodies from the interior of the eye. These reports are by Mr Critchett, Mr. Wordsworth, Mr. Hulke (operations by Mr. Bowman) and Mr. Dixon—the last a long and very minute account, and one of great value and interest.

Dr. Alfred Taylor has contributed a paper entitled “Ophthalmia as a Result of the Use of Arsenical Wall Papers”—a matter of great importance to the community, and one in which we could not have better testimony nor more reliable advice.

Mr. France has an article of some seven pages “On Cataract in Association with Diabetes”; and Mr. Hulke furnishes others—one upon “Dacryops, Dacryops Fistulosus Palpebrae Superioris; or Lachrymal Cysts and True Lachrymal Fistula”; and one upon “Rupture of the Eyeball,” with cases. The latter is liberally and well illustrated.

"A Report on Excisions of the Eye and Collateral Operations performed at the London Ophthalmic Hospital," from April, 1858, to the end of that year, concludes the number. It is prepared by Dr. Bader, the Curator and Registrar, and is very able and valuable.

There is, following the Report, an excellent wood-cut, with an accompanying explanation, and which "is a representation (of the natural size) of the fundus of the right eye after excision;" which operation was done in consequence of disease which was found to have invaded the choroid, sclerotic and retina. (See same Journal, No. 3, pp. 119, 121.)

From what we have presented of the contents of one number of this elegantly printed and carefully prepared journal, we are confident that our readers will perceive that it is one which no special ophthalmic surgeon can afford to be without. The names of its contributors alone, would sufficiently guarantee its character, and its editor is untiring both in his official capacity and as a writer for its pages. We find it ever welcome, entertaining and instructive, and wish it abundant success.

Five Essays. By JOHN KEARSLEY MITCHELL, M.D., late Professor of Practice of Medicine in Jefferson Medical College, &c. Edited by S. WEIR MITCHELL, M.D. Philadelphia: J. B. Lippincott & Co. 1859. 12mo. pp. 371.

THESE essays, by the late eminent Dr. Mitchell, of Philadelphia, will be read with interest and advantage, as the results of accurate observation and sound judgment. Their titles are, the Cryptogamous Origin of Malarious and Epidemic Fevers; Animal Magnetism, or Vital Induction; the Penetrativeness of Fluids; the Penetrativeness of Gases; a New Practice in Acute and Chronic Rheumatism. These essays have all appeared before the public, in various periodicals, with the exception of that on animal magnetism, which we commend especially to the attention of the reader, as the best paper on the subject with which we are acquainted. Dr. Mitchell devoted many years to the investigation of the phenomena of what is called mesmerism, animal magnetism, vital induction, &c., and from a man of his extreme accuracy, both in observing and weighing natural phenomena, we could but expect to have the truth of the matter. He says, speaking of the continued existence of a power which has been repeatedly pronounced to be defunct, "There must be some peculiar reason for this extraordinary vitality in an apparently absurd subject. We no longer hear of witchcraft or astrology among the educated and the wise. Belief in ghosts ceases with ignorance. But mesmerism has never lost its hold upon a portion of the *élite* of our enlightened age: and at this moment, the almost entire population of educated New England disregards the monitions of Franklin, and the ridicule of Dubois, and has its hundreds of magnetizers and its thousands of somnambulists."

In all his experiments, Dr. Mitchell was governed solely by the love of truth, and the desire of discovering it. He applied the most rigid tests, he took every precaution to exclude error, he was indefatigable in his investigations. We should be glad to give the details of his method of experimenting, but for this we can only refer the reader to the book itself. A recapitulation at the end of the essay includes thirty paragraphs. We regret that we cannot transcribe these, but our space will only allow us to present a brief abstract of them. Ac-

cording to the author, the mesmeric sleep is usually producible within ten minutes. The proportion of persons susceptible of it is about 1 in 7.14. The time required to produce the sleep varies from three minutes to twenty-four minutes; and when the patient is undisturbed, its duration is never so long as that of natural sleep, varying between half an hour and one hour and three quarters. The phenomena of the sleep are, increase of the circulation, but not of the respiration; an obtunded sensibility to pain, and sometimes, though rarely, its total oblivion; a more or less complete obliviousness of the thoughts and events of the mesmeric state, while awake, although the memory of the events of the natural state is strong in the artificial state; the retention of locomotion, and the facility of being led into suggested dreams. The alleged miracles of clairvoyance, intuition and prevision have no real existence. "The *rappo*rt, relation or communication, supposed to have an absolute existence, dependent on the mesmeric fluid, seems to be entirely voluntary on the part of the patient, and to rest on his knowledge of its supposed necessity. It is, therefore, a delusion, but one of the greatest convenience to the public exhibitors of mesmeric wonders." The effects of mesmerism as applied to the treatment of disease, are very limited. "It may sometimes be usefully employed to allay nervous irritation, procure sleep, and obtund nervous sensibility during surgical operations; but from the fewness of susceptible persons, it can be used very seldom for such purposes. In all other cases it appears to be of little use, and, so far as I know, has never cured any serious disease. On the other hand, it sometimes, especially in unpractised hands, produces frightful disorders, both of mind and body, and should, therefore, be resorted to solely for proper and important purposes, and then only with due caution."

We have but little space left to notice the other essays in this volume. They are well worth reading, however, and with this remark we dismiss them all except the last, on acute and chronic rheumatism, which is the only one in the book relating to practical medicine. The author suggests a new mode of treating rheumatism, by applying counter-irritation to the spine, at the points where the nerves issue which are distributed to the affected parts. The applications consist in cupping, blistering and leeching. A table of 32 cases is appended, of which 22 were cured within eight days; and of the remaining 10, 4 were instances of frequent relapses, through imprudent exposure during convalescence. Two others were suspected of being malingerers; only 4 cases, therefore, required any other than spinal treatment.

THE oil of the dugong has been lately proposed as a substitute for cod-liver oil by Australian physicians. Dr. Hobbs, Medical Health Officer of Moreton Bay, Australia, has again called attention to its curative properties; and if this oil should prove as efficacious in the hands of others as he believes it has in his own, there will be great reason for congratulation. The dugong is very abundant in the Australian waters and in the Indian seas, and might be obtained in large quantities at a moderate cost. It has the advantage of being a pure, sweet, and palatable oil, which may be used in cooking, and is peculiarly digestible. On the other hand, it contains no iodine.—*Lancet.*

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JUNE 2, 1859.

ANNUAL MEETING OF THE MASSACHUSETTS MEDICAL SOCIETY.

The late meeting of the Society was one of the most agreeable and successful within our recollection. Although the sun did not shine so brightly as on some days of the "Anniversary Week," there was no rain, and the coolness of the weather was a pleasant relief after the heat of the preceding day. According to custom, the Councillors met on the evening previous, and elected the officers for the ensuing year, as follows:—*President*, Dr. JOHN HOMANS; *Vice President*, Dr. John G. Metcalf; *Corresponding Secretary*, Dr. Benj. E. Cotting; *Recording Secretary*, Dr. J. B. Alley; *Librarian*, Dr. Wm. Ed. Coale; *Treasurer*, Dr. A. A. Gould; *Anniversary Chairman* for 1860, Dr. D. H. Storer; *Orator*, Dr. O. W. Holmes; *Committee of Arrangements*, Drs. W. E. Coale, Samuel Cabot, Jr., Chas. E. Buckingham, Francis Minot, and W. J. Dale. The President was authorized to appoint three delegates to the Convention for revising the National Pharmacopœia, which will meet at Washington, on the first Wednesday in May, 1860. The Treasurer's Report was read, showing that the receipts during the year amounted to \$5,114.50, and the expenditures to \$5,245.86, leaving a balance due the Treasurer of \$131.36. The income of the Permanent Fund is \$618.92, and that of the Shattuck Fund is \$504.18, the two amounting to \$1,123.10. There were also reports from the committees of the library, of finance, and of the auditors. It was voted to meet next year in Boston. A discussion was had on the alteration in the By-laws, to which we alluded a few weeks ago. No definite action was had on the subject, and the matter was referred to a committee consisting of Drs. J. Bigelow, A. A. Gould, J. Jeffries, G. C. Shattuck, H. J. Bigelow, H. H. Childs, and J. G. Metcalf, who will report at a subsequent meeting. The business of looking after the interests of the Society during the next session of the Legislature, and of taking such measures for protecting those interests as may be deemed expedient, was referred to the same committee. Dr. Jarvis, from the Committee on Zymotic Diseases, reported an order appointing the same committee for the ensuing year, which was adopted. We subjoin the Librarian's Report.

"The Librarian of the Massachusetts Medical Society begs leave to make his annual report. In doing this, he must premise he cannot say much, because he has not much to say. During the past year, there has been the average number of omissions to inform the Librarian of assessments having been paid, and of residences having been changed, and consequently the average number of complaints that books and periodicals have not been received. The result of these neglects and omissions the Librarian has set himself diligently to correct, and going about his labors with a strong determination to please every one in general and himself in particular, he flatters himself he has succeeded in both aims. If any gentleman has still anything to complain of, the Librarian begs he may at once be informed, that he may have an additional opportunity of indulging his strong desire to set as many

things to rights as possible. The remarkable, not to say startling event of the year—one which he trusts will cause his term of Librarianship to be *cum creta notata*—one that will make this an *annus mirabilis* in the history of the Massachusetts Medical Society—is the completion of Copland's Dictionary. Through twenty-five years, “in linked sweetness long drawn out,” the publication of this work has been protracted. Empires have fallen, others have risen on their ruins, and these in turn given way to others—the political and scientific aspect of the face of the globe has been changed many times and oft—but Dr. Copland, with continuous and unflagging pertinacity, has progressed steadily through the alphabet. All things sublunary, or to put it more strongly, all things finite, have a termination, and to-morrow men who, in the prime of life and in the full flush of youthful hope, consulted the letter A, may, in gray hairs and spectacles, improve their knowledge in all medical subjects commencing with U, V, W, X, Y & Z.

“The Librarian has supplied the various Libraries specified in the vote of the Councillors at the meeting of February, 1859, with such volumes as will complete their sets of the publications of the Society. The Library is in good condition, but the permanent additions to it during the last year have been very few; but as none of the books are read, we cannot regret deeply there are no more to read. All of which is respectfully submitted.

W. E. COALE, M.D.,

Librarian.”

The meeting of the Society, on Wednesday, was called to order by the President, Dr. HOMANS. After some preliminary business, the Committee on Scientific Communications reported that the following papers were prepared for reading: 1. On Haemoptysis, by Dr. John Ware; 2. A Case of Hermaphroditism, and a Case of Excision of the Knee-Joint, by Dr. J. Mason Warren; 3. A Report on Zymotic Diseases, by the Middlesex East District Medical Society; 4. On the Condition of the State Registration, by Dr. Josiah Curtis; 5. On Veratrum Viride, by Dr. Wm. Ingalls. There was only time for the reading of the first three of these papers; which will be printed in the Transactions of the Society.

The Committee on the Prize Essay announced that the Prize had been unanimously awarded to Dr. D. D. SLADE, of Boston, for an essay on the subject, “To what Affections of the Lungs does Bronchitis give origin?”

The Annual Address was delivered at one o'clock, by Dr. TIMOTHY CHILDS, of Pittsfield. The subject was the Rise, Progress and Present Position of Medical Science, and the discourse was able, interesting and instructive.

A large number of Fellows assembled at the Dinner in Faneuil Hall, at half past two o'clock. We judge that there could not have been less than 500 present. Owing to the illness of Dr. SABIN, the Anniversary Chairman, Dr. COALE, Chairman of the Committee of Arrangements, presided, in a most able manner, and contributed greatly to the interest and hilarity of the occasion. The Divine Blessing was invoked by the Rev. Dr. Rollin H. Neale. After dinner, a number of excellent speeches were made. Dr. HOMANS, the President, responded to the first toast, “The Founders of the Society,” and spoke of the origin of the Society, and the character of some of its founders. The second toast was—

Our Nestor—Filled with years and with honor, may he have a true Homer to perpetuate his virtues.

Dr. JAMES JACKSON, on rising in answer to this toast, was greeted with three cheers and continued applause, the entire company rising and standing in their places. Dr. Jackson excused himself from making a speech, on the ground of physical inability, and called upon Dr. Oliver Wendell Holmes to read a speech which he had transmitted to him. Dr. Holmes complied with the request, and read the paper, which contained a handsome tribute to Dr. J. Baxter Upham, and closed with the following toast:

Dr. J. Baxter Upham—He first invoked music to aid the other sciences in investigating the functions of the heart. May his own heart always give normal sounds to the ears of those who listen to them, and may it always continue to beat in harmony with those of the wise and good.

Dr. Upham made an acknowledgment of thanks for the unexpected compliment which had been paid to him.

Dr. Holmes here read the following verses :

THE GRAY CHIEF.

'Tis sweet to fight our battles o'er,
And crown with honest praise
The gray old chief, who strikes no more
The blow of better days.

Before the true and trusted sage
With willing hearts we bend,
When years have touched with hallowing age
Our Master, Guide and Friend.

No temple, though its walls resound
With bursts of ringing cheers,
Can hold the honors that surround
His manhood's twice told years!

For all his manhood's labor past,
For love and faith long tried,
His age is honored to the last,
Though strength and will have died.

But when, untamed by toil and strife,
Full in our front he stands,
The torch of light, the shield of life,
Still lifted in his hands,

The recital of the poem was received with great applause.

Dr. HOLMES was next called up by the following toast :

The Hersey Professor of Anatomy in Harvard University—Equally great at the dissecting table, the breakfast table and the dinner table.

Rev. Dr. NEALE made a most entertaining speech, in reply to a toast "The Clergy," and Mr. CHARLES W. STOREY responded, by a witty and graceful reply, to the toast of "The Bar."

The following toast was responded to by Dr. Channing, in his usual felicitous vein :

Our friend, Dr. Walter Channing—Though somewhat "fallen into the sere and yellow leaf," we are glad to find that he has not yet taken his place in the genus *Gaultheria procumbens*.

Other speeches were made by Dr. MAURAN, of Providence, Dr. H. H. CHILDS, of Pittsfield, and others, and the company then separated.

The utmost good feeling prevailed throughout the occasion, and the Fellows will long look back upon this anniversary as one of the most agreeable in the annals of the Society.

Vaccination Fifty Years Ago.—The following advertisement from the Concord (N. H.) Gazette, of Sept. 10, 1814, which was sent us by a friend, may prove of interest, as showing the efforts made, fifty years ago, by the government, for spreading vaccination among the people. We do not know whether the law permitting vaccine virus to be carried free in the mails has ever been repealed.

"VACCINE MATTER.—The Subscriber, having been appointed by the President of the United States, Agent for Vaccination, hereby gives notice, that Genuine Vaccine Matter will be furnished to any physician, or other citizen of the United

States, who may apply to him for it. The application must be made by post, and the requisite fee (five dollars), in current bank paper of any of the Middle States, forwarded with it. When required, such directions, &c., how to use it, will be furnished with the matter, as will enable any discreet person who can read and write to secure his own family from the smallpox, with the greatest certainty, and without any trouble or danger.

"All letters on this subject to and from the undersigned, and not exceeding half an ounce in weight, are carried by the United States Mail free of postage, in conformity to a late act of Congress, entitled 'An Act to encourage Vaccination.'

JAMES SMITH,

U. States Agent for Vaccination, Baltimore.

"N. B.—Editors of Newspapers within the United States are requested to insert the above once a week for three weeks, and forward a paper containing it to the Agent for Vaccination, who will remit payment for the same by post.

Sept. 6, 1814."

Obituary.—We are pained to record the death of Dr. JOHN HENRY DRINKER, formerly of New Bedford, who graduated at the Medical School of Harvard University in 1844. He was known to a large circle of friends both in his native city, in Boston, and in Philadelphia (where he resided during the past few years), and his loss will be deeply regretted by all who knew him. His talents, his genial character and his entertaining qualities made him a general favorite, while his affectionate disposition and ready sympathy endeared him to his family and to his intimate friends. He died at Magnolia, in East Florida, after suffering many years from a painful illness, which he bore with Christian resignation.

The Naval Medical Board of Examiners, recently in session at Philadelphia, has recommended for admission the following candidates for the position of assistant surgeons in the Navy, viz.: No. 1. William Bradley, of Pennsylvania. No. 2. Edward F. Corson, of Pennsylvania. No. 3. David Kindleberger, of Ohio. No. 4. Joseph D. Grafton, of Arkansas. No. 5. Robert L. Weber, of Pennsylvania. No. 6. Robert J. Freeman, of Virginia. No. 7. William E. Taylor, of Virginia. No. 8. Bennett W. Green, of Virginia. No. 9. James McMaster, of Pennsylvania. No. 10. James W. Herty, of Georgia. The first five named will be commissioned at once; the remainder as vacancies may occur in the medical corps. The following assistant surgeons were examined by the Board, and passed a satisfactory examination, for promotion, viz.: Thomas J. Turner, Wm. G. Hay, R. P. Daniel and Wm. T. Hord.

Resignation of Professor George B. Wood.—We are sorry to have occasion to announce that this distinguished physician has resigned the posts he has for so many years filled with such signal ability, of Professor of the Theory and Practice of Medicine in the University of Pennsylvania, and of Physician to the Pennsylvania Hospital. The former resignation takes effect at the close of the next course of lectures; the latter, immediately.

There are few men in this country, who have served their profession as faithfully, honorably, and disinterestedly as Dr. Wood has, and it is not too much to say that the news of his retirement from the active duties of the profession, will be received by his brethren with universal regret.—*Med. and Surg. Reporter.*

There is now going up in Twenty-third Street, near Sixth Avenue, New York, a splendid edifice for the "College of Veterinary Surgeons," which is to cost \$40,000.

Communications Received.—Carbonate of Ammonia in Measles.—If "CATO" wishes his communication printed, or even read, he must send us his name.

MARRIED.—At Charlestown, 24th ult., Dr. David B. Nelson, of Manchester, N. H., to Miss Susan E. Bridges, of Charlestown.

DIED.—At Magnolia, East Florida, 16th ult., Dr. John Henry Drinker, formerly of New Bedford, 33.

Deaths in Boston for the week ending Saturday noon, May 28th, 65. Males, 34—Females, 31.—Accidents, 6—asthma, 1—bronchitis, 1—inflammation of the brain, 1—congestion of the brain, 1—cancer (in the throat), 1—consumption, 13—convulsions, 1—cholera infantum, 1—croup, 3—dysentery, 2—dropsey in the head, 3—debility, 4—infantile diseases, 3—typhoid fever, 1—disease of the heart, 2—intemperance, 2—inflammation of the lungs, 3—disease of the liver, 1—marasmus, 1—measles, 2—old age, 2—palsy, 2—smallpox, 2—teething, 2—unknown, 2—inflammation of the uterus, 1—whooping cough, 1.

Under 5 years, 23—between 5 and 20 years, 3—between 20 and 40 years, 11—between 40 and 60 years 11—above 60 years, 15. Born in the United States, 48—Ireland, 14—other places, 8.